

Application Serial No.: 10/054,238

Attorney Dkt. No.: VANHORN-01

REMARKS/ARGUMENTClaim Rejections Based On Prior Art

Claims 1-45 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Pat. No. 5,851,281, issued to *Alves*, or U.S. Pat. No. 5,785,419, issued to *McKelvey et al.*, or U.S. Pat. No. 5,669,969, issued to *Meade et al.*, or U.S. Pat. No. 5,641,584 issued to *Anderson et al.*, or U.S. Pat. No. 5,484,480, issued to *Styron*, or U.S. Pat. No. 5,391,245, issued to *Turner*, or U.S. Pat. No. 5,346,549, issued to *Johnson*, or U.S. Pat. No. 5,196,061, issued to *Thomas et al.*, or U.S. Pat. No. 4,402,751, issued to *Wilde*, or U.S. Pat. No. 4,210,457, issued to *Dodson et al.*, or U.S. Pat. No. 4,040,851, issued to *Ziegler et al.*, or U.S. Pat. No. 4,028,130, issued to *Webster et al.*, or U.S. Pat. No. 3,873,351, issued to *Ueda et al.*, or U.S. Pat. No. 3,403,205, issued to *Ottenholm*. As grounds for rejecting claims 1-45, the Examiner asserts that each of the foregoing references discloses the claimed process for preparing a cellulose aggregate concrete by purifying and admixing.

During two telephone conferences with the Examiner that took place in late October and early November of 2003, the Examiner graciously reconsidered the large number of 102(b) references cited in the Office Action and advised that the most closely related references are the above-referenced *Turner*, *Wilde*, *Ziegler et al.* and *Ottenholm* references. Therefore, and with the express verbal consent and agreement of the Examiner, this response and amendment is properly limited in scope to addressing the foregoing rejections under the *Turner*, *Wilde*, *Ziegler et al.* and *Ottenholm* references.

Applicant has amended independent claims 1 and 26 and dependent claims 24 and 43. The amendments to the independent claims are made solely for the purpose of clarifying the existing claim language and it is submitted that their scope has not been narrowed. The amendments to the dependent claims are to correct grammatical errors and for clarification. Accordingly, none of the amendments are intended to narrow the scope or surrender any of the previously claimed subject matter. Applicant has also

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added new independent claim 46 and claims 47 through 72 depending therefrom. No claims have been canceled.

As explained throughout the specification, Applicant's proposed invention is directed, in part, to a method for producing a lightweight cellulose-based concrete aggregate product that is more efficient, in terms of eliminating intermediate water extraction steps of the prior art, and results in an optimally fortified final aggregate product. Applicant's technique for improving process efficiency is interrelated to the process means by which optimum fortification is achieved. Namely, and as explained in Applicant's specification at page 3, lines 24-27, page 3, line 31 through page 4, line 1, and page 8, lines 5-11, a fortifying solution is prepared containing sufficient water for the final concrete mixture. The fortifying solution is then added to thoroughly dried cellulose fibers to fortify the fibers. As explained at page 3, lines 27-30 and page 5, lines 28-30, fortification of the fibers is optimized by avoiding extraction of water from the mixture to avoid removal of fortification components. To eliminate the need to remove excess water which would result in the loss of fortification components, all of the water to be used in the concrete mixture is included in the fortification step and the concrete is added to the fortified cellulose fiber mixture in dry form. The addition of cement in dry form enables optimum control to achieve the desired consistency of the final concrete mixture without the potential need to remove excess water from either the fortified fiber mixture or the final concrete mixture which would otherwise be a significant problem.

Independent claim 1 has been amended in an effort to more specifically characterize the foregoing features and thus distinguish the subject method originally claimed therein from the subject matter disclosed by the *Turner, Wilde, Ziegler et al.* and *Ottenholm* references. New independent claim 46 has been added to claim another embodiment of the process. Specifically, claim 1 has been amended to recite a process for preparing a cellulose modified aggregate concrete including, in part, a step of "preparing a fortifying solution comprised of at least one fortifying component and sufficient water for the final aggregate concrete mixture," followed by steps of "applying said fortifying solution to ... a quantity of dried cellulose fibers ... to produce a fortified

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fiber mixture" and "admixing a quantity of cement to said fortified fiber mixture, wherein said quantity of cement is sufficient to coat the fibers within said fortified fiber mixture and utilize substantially all remaining water therein to hydrate and activate the cement coating ..." New independent claim 46 contains this same language.

*Turner* discloses a method of, and compositions for, making a fire-resistant door core assembly in which a core slab is prepared from an aqueous slurry that may include fiberglass strands as an additive. While describing methods for preparing the slurry comprising various components, *Turner* fails to disclose any method for "preparing a cellulose modified aggregate concrete" since the only "fiber material" described as applicable to any of the slurry preparation processes is fiberglass. The fortification aspect of Applicant's proposed invention in which a fortification solution is applied to and mixed with "... a quantity of thoroughly dried cellulose fibers until said solution and the at least one fortifying component therein have thoroughly coated and penetrated said fibers to produce a fortified fiber mixture" is therefore entirely absent. Applicant thus contends that *Turner* does not disclose the method as set forth in claim 1 or claim 46.

Applicant further contends that amended claim 1 is not anticipated by the *Wilde* reference. As explained in the abstract, *Wilde* is directed towards a building material and method of producing the same wherein a concrete mixture containing fibers may be used. While incorporating cellulose based fiber material, the final concrete aggregate product and method for producing the same disclosed by *Wilde* are inconsistent with the subject matter set forth in amended independent claim 1. Specifically, and as explained at col. 2, lines 24-35, and col. 4, lines 15-19 the preparation of the aggregate material includes steps of adding lime to water which forms a whitewash mix to which dried fibrous materials are added. The resultant limed fiber material is allowed to dry into a hardened aggregate material to which cement is added and serves as a binding grout. The added cement is necessarily in a plastic state as explained by *Wilde* at col. 4, lines 61-66. Furthermore, as described at col. 2, lines 19-27, the whitewash mixture is screened, with the excess whitewash liquid drained for reuse. Nowhere does *Wilde* disclose adding cement to a hydrated fortification mixture comprising treated cellulose fibers to form a

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cellulose modified aggregate concrete mixture and thus *Wilde* does not anticipate amended independent claim 1 or new claim 46.

The *Ottenholm* reference discloses, in its description of background art at col. 2, lines 14-44, that it is known to manufacture concrete having organic fibrous material as filling material. Included as concrete preparation steps, *Ottenholm* discloses adding a sulfate solution to the organic fibrous material and subsequently adding a base liquid such as a lime or cement milk. However, as with *Wilde*, *Ottenholm* does not disclose a step of "admixing a quantity of cement to said fortified fiber mixture, wherein said quantity of cement is sufficient to coat the fibers within said fortified fiber mixture and utilize substantially all remaining water therein to hydrate and activate the cement coating ..." and thus does not anticipate amended claim 1 or new claim 46.

The *Ziegler* reference, as explained at col. 1, lines 35-40, and col. 4, lines 50-65, discloses a method for producing cotton-cement articles, wherein cotton fiber material is dry mixed with cement and inorganic filler components and subsequently added together with water. This is in clear contrast to Applicant's method as set forth in amended claim 1 and new claim 46 wherein the cement is added after the fortified cellulose mixture has been formed by first preparing and applying the fortifying solution to the dried cellulose fiber.

Regarding the rejection of claims 26-45, Applicant contends that none of the *Turner*, *Wilde*, *Ziegler et al.* or *Ottenholm* references disclose a process for preparing a cellulose modified aggregate while simultaneously reclaiming submerged land including, in part, steps of: depositing [a] cellulose based waste material into a selected body of water; maintaining said cellulose waste material in said body of water until said waste material has absorbed a substantial amount of water therefrom; removing said cellulose waste material from said body of water and allowing said material to sun-dry; grinding said treated material so as to remove extraneous materials therefrom and so as to comminute said materials into fibers; adding fortifying solution to said sun-dried cellulose fibers so as to strengthen, preserve, protect and fortify said material; treating said sun-dried fibers with at least one activating agent and at least one water sealer admix

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component under high pressure and at increased temperature to cure said treated fibers into a raw aggregate material; and further grinding said raw aggregate material so as to yield a lightweight, waterproof material which may be used to produce a modified cellulose aggregate cement with the addition of cement and water."

Since none of the *Turner, Wilde, Ziegler et al.* or *Ottenholm* references either alone, or in any combination, discloses a method for producing an aggregate concrete mixture in which a fortification solution containing sufficient water for the final concrete mixture is applied to thoroughly dried cellulose fibers and subsequently adding cement to the resulting fortified cellulose mixture, as set forth in amended independent claim 1 and claim 46, it follows that claim 1 and claims 2-25, and claim 46 and claims 47-72 depending therefrom are patentably distinct with respect to these as well as all other prior art known to Applicant. Furthermore, since none of the foregoing references disclose a process for preparing a cellulose modified aggregate while simultaneously reclaiming submerged land including steps of: depositing a cellulose based waste material into a selected body of water; maintaining said cellulose waste material in said body of water until said waste material has absorbed a substantial amount of water therefrom; removing said cellulose waste material from said body of water and allowing said material to sun-dry; grinding said treated material so as to remove extraneous materials therefrom and so as to comminute said materials into fibers; and adding fortifying solution to said sun-dried cellulose fibers so as to strengthen, preserve, protect and fortify said material, it follows that amended claim 26 and claims 27-45 depending therefrom are also patentably distinct from the foregoing *Turner, Wilde, Ziegler et al.* and *Ottenholm* references.

For the foregoing reasons, Applicant believes amended claims 1, 26, and new claim 46 and all claims depending therefrom to be patentably distinct from the prior art and a Notice of Allowance to that effect is respectfully requested. Applicant has diligently responded to the Office Action by pointing out with particularity how the claims clearly define the proposed invention, and furthermore invite the Examiner to contact Applicant at telephone number (904) 346-5573 if such communication would help to expedite the continued prosecution of the present application.

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The Applicant has added 27 claims in excess of 20 totaling an additional fee \$243.00 (27 dependent claims x \$9.00 (small entity)) for the additional claims. There is no additional charge for the new independent claim as the Application contains a total of 3 independent claims. As set forth below, the Commissioner is authorized to charge the \$243.00 fee (and any underpayments) to the undersigned's deposit account.

#### PETITION TO EXTEND TIME

Accompanying this amendment is a Petition under 37 CFR 1.136(a) to extend the time to respond to the instant Office Action mailed September 25, 2003 from December 25, 2003 until March 25, 2004. It is believed that the fee for said petition is \$475.00 (small entity). As set forth below, the Commissioner is authorized to charge the \$475.00 fee (and any underpayments) to the undersigned's deposit account.

#### PAYMENT OF FEES

The Commissioner is authorized to charge the amount for the petition for extension of time (\$475.00) and for the additional claims (\$243.00) to the below identified deposit account.

DEPOSIT ACCOUNT NUMBER: 502260


DEPOSIT ACCOUNT NAME: Rogers Towers, P.A.

To the extent any additional fees are due hereunder, including any additional fees for the Petition for extension of time under 37 CFR 1.136(a) or for the additional claims, the Commissioner is hereby authorized to charge any additional fees in excess of the amounts identified above to the foregoing deposit account and to credit any refunds thereto.

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Respectfully submitted,

  
Richard S. Vermut  
Reg. No. 41,362  
ROGER TOWERS, P.A.  
1301 Riverplace Blvd, Suite 1500  
Jacksonville, FL 32207  
(904) 398-3911

ATTORNEY FOR APPLICANT